

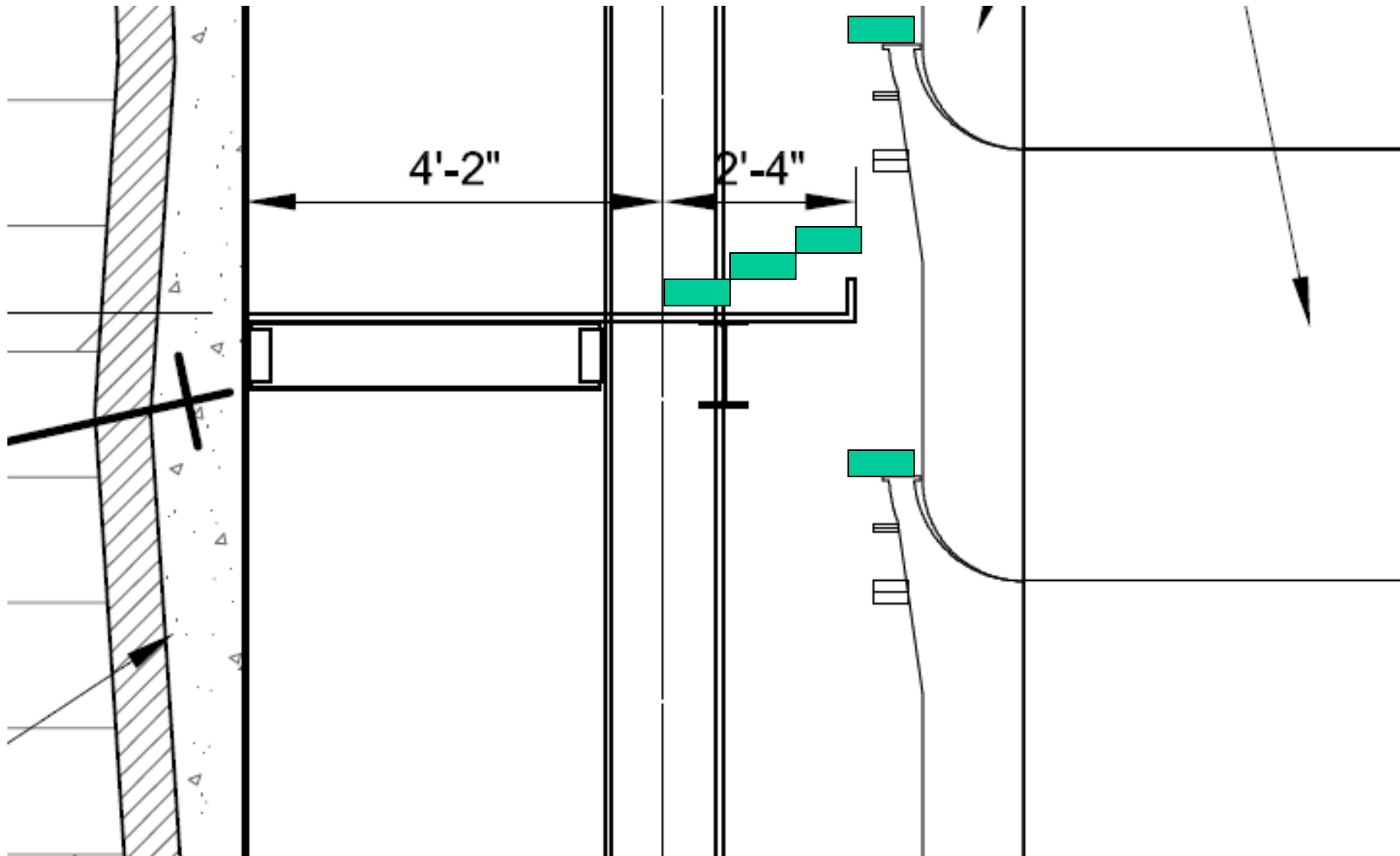
Electronics Installation

- Connections
 - Box to manifold
 - Already contains motherboard
 - APD package to manifold
 - APD to motherboard
 - N2 to APD module
 - Water to APD 50mL/min ~10-15C
 - HV
 - LV (x2) One for quiet power, one for TEC
 - Ethernet
 - Cover

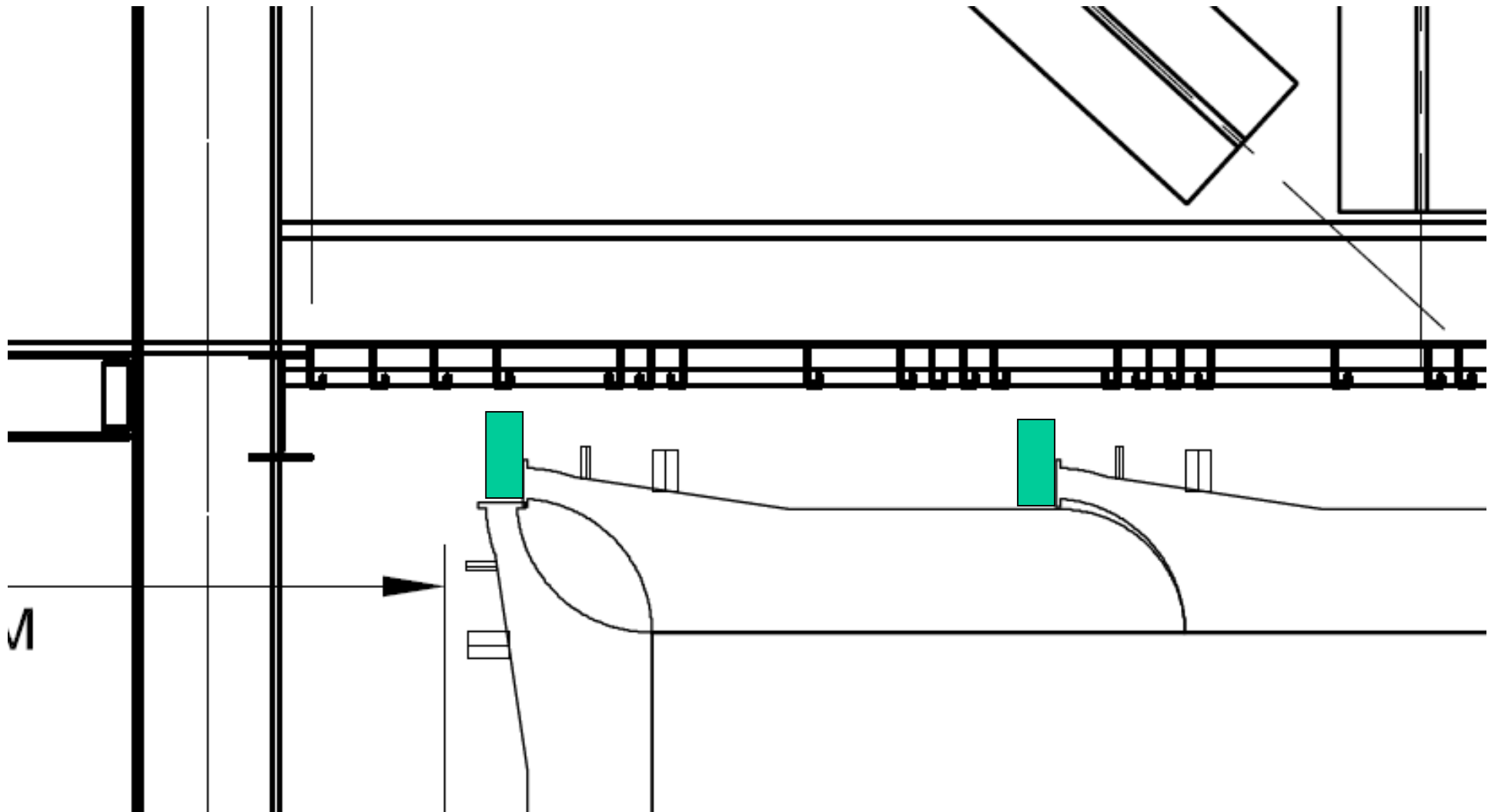
APD Readout Box Installation

Approx Box

4"x4"x10"

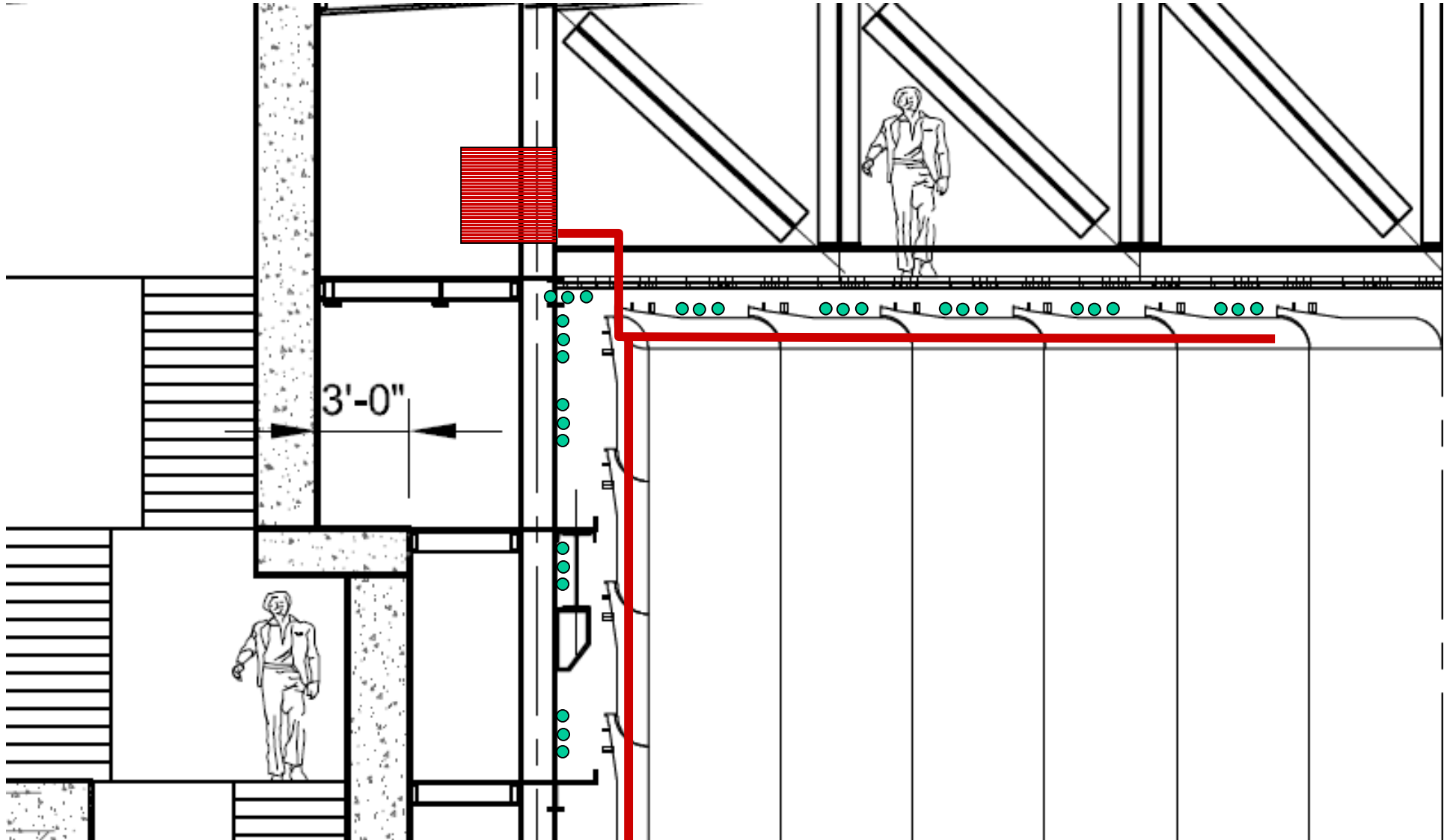


Top Installation



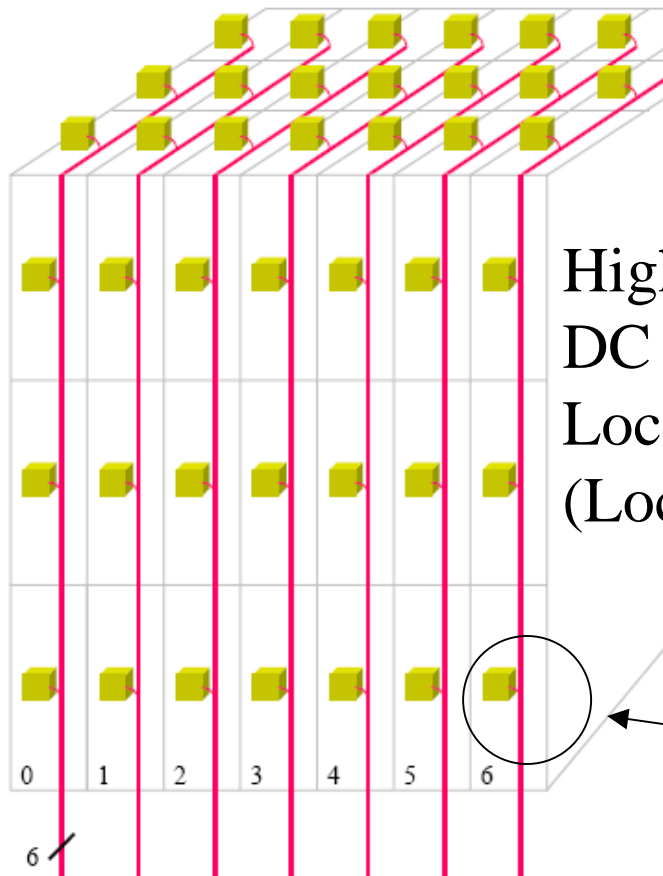
Utilities Version 1

Roof Distribution

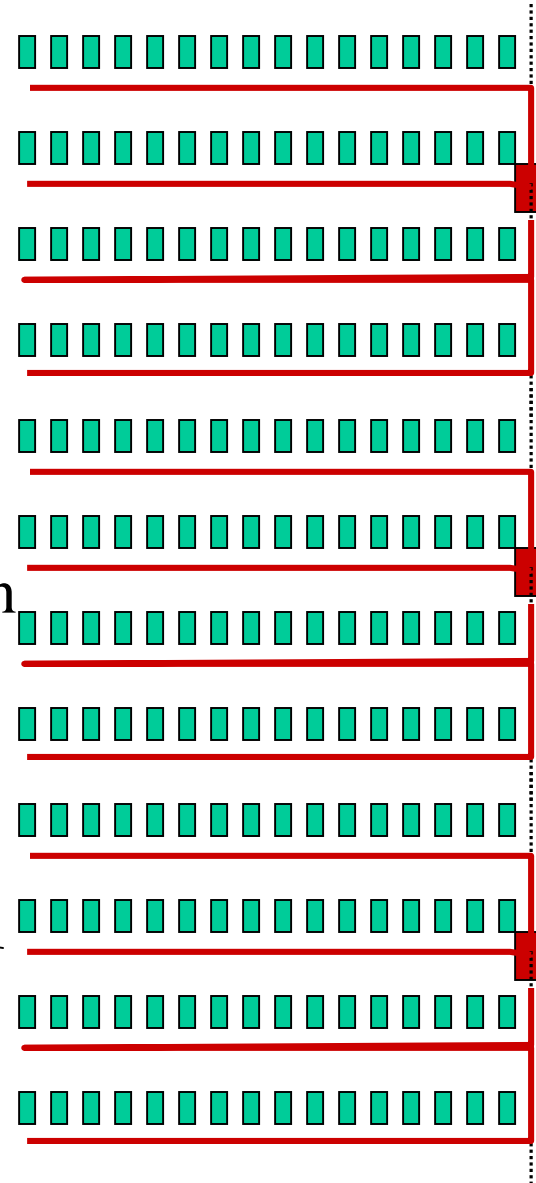


Utilities Version 2

Array Distribution



High Voltage
DC distribution
Local redistribution
(Local=4m)



+Mirror image

Utilities Version B

- Hybrid
 - Use Roof/Harness distribution on top
 - Use Array Distribution on sides
 - Could fit better with access constraints and installation efficiency
 - Cost in efficiency, electrically and M&S
 - Can we do water also hybrid?
 - If not, does it make sense to do any?

Utilities

- Want Water to have longitudinal runs
- Want LV to have short runs
 - Can install longitudinal or radial (or both)
 - We're flexible (you do the work)
- HV works either way too, no current, no cable losses, just cable expense.
- Desire simple connections